Advanced Searching Techniques

Natural Language Searching - A Search Like Google

Google has made most of us comfortable with Natural Language searching. It takes the words you type into the box and searches for them using the Boolean operator 'and' (see below on Boolean searching). It also tries to find instances where the words are close to each other within the result; this is called proximity (see also below). Clipper Cat and many of our article databases now use Natural Language Searching, so when you type in a keyword search like 'java web application' you will probably get some hits. However, you will be able to significantly improve the results from your searching by using the following techniques.

Boolean Searching

Broaden or narrow your search by combining words or phrases using the Boolean operators AND, OR, and NOT. The diagrams below show graphically how using the AND operator narrows a search, using OR broadens a search, and using NOT excludes material from a search. Many databases and search engines have an Advanced Search interface that allows for Boolean searching; you can also try just using a Boolean operator in the main search box.

Operator	Example search	The search will find...	Venn diagram results shown in black
AND	**north carolina and prohibition**	items containing "North Carolina" and "prohibition." AND narrows a search, resulting in fewer hits.	
OR	**zimbabwe or rhodesia**	items containing either "Zimbabwe" or "Rhodesia" or both. OR broadens a search, resulting in more hits.	
NOT*	**mexico not new mexico**	items containing "Mexico" but not "New Mexico." *Caution!* It's easy to exclude relevant items.	
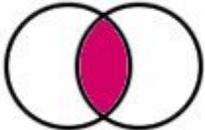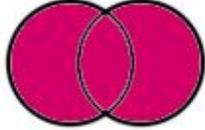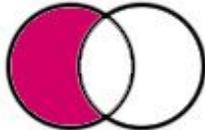
Parentheses (Nesting)

Use parentheses to clarify relationships between search terms.

Example: (television or mass media) and women

This search looks for both "television and women" and "mass media and women."

Truncation or Wildcards

A symbol at the end of a word stem provides for all variants on the word stem. The most commonly used symbol is the asterisk (*).

Example: educat* will retrieve educate, educating, education, educational, educator, educators, etc.

Be careful not to truncate too far, or you will retrieve unrelated words! A symbol within a word provides for all possible variants inside a word or word stem. A commonly used symbol for internal truncation is **!**.

Example: wom!n will retrieve woman and women.

You may combine truncation symbols in one search. Look at the help pages for the database you are using to determine the truncation symbols. Most systems provide truncation but some provide only simple plurals.

Proximity Operators

Sometimes in a full text search you want words that occur close to one another but not as a phrase. Many full text article databases allow searching with proximity operators in their advanced search interfaces. Consult the help pages of the database you are using to see what proximity operators work for it.

Operator	Example search	The search will find...
WITH	**logical with positivism**	Usually requires "logical" and "positivism" to be adjacent to each other in the order typed. Adding a number following "with" requires the terms to occur with up to that number of other words between the two terms in the order typed.
NEAR	**macro near virus**	Usually requires "macro" and "virus" to be adjacent to each other in either the order typed or the reverse order. Adding a number following "near" requires the terms to occur with up to that number of other words between the two terms in either the order typed or the reverse order
ADJ or ADJACENT	**harry adj truman**	ADJ is usually equivalent to WITH in requiring the search terms to be adjacent to each other in the order typed. You are generally not allowed to specify the number of words that occur between the two search terms; individual databases may vary.